



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,923	11/21/2003	Feng-wei Chen Russell	RSW920030185US1	2402
45541 7590 07/23/2008 HOFFMAN WARNICK LLC 75 STATE ST 14TH FLOOR ALBANY, NY 12207				
EXAMINER				
BETTT, JACOB F				
ART UNIT		PAPER NUMBER		
2164				
MAIL DATE		DELIVERY MODE		
07/23/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/718,923

Applicant(s)

RUSSELL ET AL.

Examiner

Jacob F. Betit

Art Unit

2164

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7,8,10-14,16-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7,8,10-14,16-20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 April 2008 has been entered.

Remarks

2. In response to communications filed on 24 April 2008, claims 7, 14, and 20 have been amended and claims 1-6, 9, 15, and 21 have been cancelled per the applicant's request. Claims 7, 8, 10-14, 16-20, and 22 are presently pending in the application.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14 and 16-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claim is directed toward a system which is only made up of software elements. Software is not one of the four categories of invention and therefore this claim is not statutory. Software is not a series of steps or acts and thus is not a process. Software is not a physical article or object and as such is not a machine or manufacture. Software is not a combination of substances and therefore not a composition of matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-8, 10-14, 16-20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vishnubhotla (US patent application publication No. 2002/0147599 A1) in view of Bloom et al. (U.S. patent application publication No. 2003/0212678 A1).
- 6.

As to claim 7, Vishnubhotla teaches a method of evaluating a set of data mining algorithms (see paragraphs 0096 and paragraph 0101), the method comprising:

selecting the set of data mining algorithms, the selecting further comprising:

selecting a business taxonomy (see paragraph 0012);

selecting a business problem based on the business taxonomy (see paragraph 0037-0038); and

selecting the set of data mining algorithms based on the business problem (see paragraph 0011 and 0014);

obtaining a set of goals for the set of data mining algorithms, each data mining algorithm in a set of data mining algorithms being configured to solve the set of goals (see paragraphs 0096 and 0101);

applying each data mining algorithm to a dataset (see paragraph 0097 and 0104);

calculating a performance value for each data mining algorithm based on the set of weights and a set of results for the applying step (see paragraphs 0099 and 0105).

Vishnubhotla does not teach the details of calculating the performance value including assigning a weight to each goal in the set of goals for the data mining algorithm; storing the set of performance values for use in evaluating the set of data mining algorithms.

However, Bloom et al. teaches this, see paragraphs 99-104. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Vishnubhotla to include the teachings of Bloom et al. because these teachings would allow the user to properly test data mining algorithms that are going to be used by the end user.

As to claim 8, Vishnubhotla as modified, teaches wherein the selecting step is based on the set of goals (see Vishnubhotla, paragraph 0013, where the goal is to create the best possible answer for the particular problem).

As to claim 10, Vishnubhotla as modified, teaches further comprising ranking the set of data mining algorithms based on the performance values (see Vishnubhotla, paragraphs 0097 and 0102).

As to claim 11, Vishnubhotla as modified, teaches wherein the assigning step includes: identifying a set of error cases for each goal; and assigning a weight to each error case in the set of error cases (see Bloom et al., paragraphs 0015 and figure 15).

As to claim 12, Vishnubhotla as modified, teaches wherein the set of data mining algorithms includes at least one data mining algorithm having a first set of parameter values and the at least one data mining algorithm having a second set of parameter values (see Vishnubhotla, paragraphs 0097 and 0102 and see Bloom et al., paragraph 0006).

As to claim 13, Vishnubhotla as modified, teaches further comprising:
selecting a data mining algorithm in the set of data mining algorithms; and generating a data mining model based on the selected data mining algorithm (see paragraph 0011).

As to claim 14, Vishnubhotla teaches system for evaluating a set of data mining algorithms having a set of goals, the system comprising:

a selection system for selecting the set of data mining algorithms, the selection system further comprising:

a system for selecting a business taxonomy (see paragraph 0012);

a system for selecting a business problem based on the business taxonomy (see paragraph 0037-0038); and

a system for selecting the set of data mining algorithms based on the business problem (see paragraph 0011 and 0014);

an application system for applying each data mining algorithm to a dataset (see paragraph 0097 and 0104);

a performance system for calculating a performance value for each data mining algorithm (see paragraphs 0099 and 0105).

Vishnubhotla does not distinctly disclose

an assignment system for assigning a weight to each goal in the set of goals, each data mining algorithm in the set of data mining algorithms being configured to solve the set of goals; a performance system for calculating a performance value for each data mining algorithm based on the weights assigned to the set of goals and a set of results for the applying; and a system for storing the set of performance values for use in evaluating the set of data mining algorithms.

However, Bloom et al. teaches this, see paragraphs 99-104. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Vishnubhotla to include the teachings of Bloom et al. because these teachings would allow the user to properly test data mining algorithms that are going to be used by the end user.

As to claim 16 the applicant is directed to claim 10 above.

As to claim 17, Vishnubhotla as modified, teaches further comprising a summary system for displaying the performance values for at least some of the set of data mining algorithms to a user (see Bloom et al. paragraph 0162).

As to claim 18, Vishnubhotla as modified, teaches further comprising a generation system for generating a data mining model based on a data mining algorithm selected from the set of data mining algorithms (see vishnubhotla, paragraph 0098).

As to claim 19, Vishnubhotla as modified, teaches wherein the application system applies the set of data mining algorithms in parallel.

As to claim 20, Vishnubhotla teaches program product stored on a recordable medium for evaluating a set of data mining algorithms having a set of goals, which when executed comprises:

program code for selecting the set of data mining algorithms, the program code for selecting further comprising:

program code for selecting a business taxonomy (see paragraph 0012);

program code for selecting a business problem based on the business taxonomy (see paragraph 0037-0038);

and

program code for selecting the set of data mining algorithms based on the business problem (see paragraph 0011 and 0014);

each data mining algorithm in the set of data mining algorithms being configured to solve the set of goals (see paragraphs 0096 and 0101);

program code for applying each data mining algorithm to a dataset (see paragraph 0097 and 0104);

program code for calculating a performance value for each data mining algorithm (see paragraphs 0099 and 0105).

Vishnubhotla does not distinctly disclose program code for assigning a weight to each goal in the set of goals, program code for calculating a performance value for each data mining algorithm based on the weights assigned to the set of goals and a set of results for the applying;

Art Unit: 2165

and program code for storing the set of performance values for use in evaluating the set of data mining algorithms.

However, Bloom et al. teaches this, see paragraphs 99-104. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Vishnubhotla to include the teachings of Bloom et al. because these teachings would allow the user to properly test data mining algorithms that are going to be used by the end user.

As to claim 22, the applicant is directed towards claim 10 above.

Response to Arguments

7. Applicant's arguments with respect to claims have been considered but are moot in view of the new grounds of rejection. Further, the applicant is directed to the remarks made in the advisory action dated 17 April 2008.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Betit whose telephone number is (571)272-4075. The examiner can normally be reached on Monday through Friday 10:30 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 10/718,923

Page 9

Art Unit: 2165

/Neveen Abel-Jalil/

Primary Examiner, Art Unit 2165